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Cruise Report

R/V Farnella, 1985 Leg 4

4 November 1985 - 3 December 1985

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Woods Hole, MA 02543

Cruise Report

Ship: R/V FARNELLA Roy Hadgraft, Captain

Cruise number FRNL 85-4

Area of operations: Exclusive Economic Zone (EEZ) of Puerto Rico and the U.S. Virgin Islands

Cruise dates and

ports: Begin - 4 Nov 85 (San Juan, Puerto Rico)
End - 3 Dec 85 (San Juan, Puerto Rico)

Scientific Party: This cruise was carried out jointly by the U.S. Geological Survey (USGS) and the British Institute of Oceanographic Sciences (IOS). Personnel from the Geological Survey of the Dominican Republic (DR), Puerto Rico's Department of Natural Resources (DNR) and Great Britain's Research Vessel Services (RVS) also participated. Scanlon (USGS) and Masson (IOS) shared the duties of Chief Scientist while Harris (IOS) was designated as Party Chief.

Kathy Scanlon	Geologist	USGS/Woods Hole
Doug Masson	Geologist	IOS/U.K.
Bob Halley	Watchstander	USGS/Denver
Juan Trias	Watchstander	DNR/Puerto Rico
Rafael Rodriguez	Watchstander	USGS/San Juan
	4 Nov-15 Nov	
Chris Polloni	Watchstander	USGS/Woods Hole
	15 Nov-3 Dec	
Elsa Hernandez	Watchstander	Dominican Republic
Malcolm Harris	GLORIA Engineer	IOS/U.K.
Jon Campbell	GLORIA Engineer	IOS/U.K.
Eric Darlington	GLORIA Engineer	IOS/U.K.
Dann Blackwood	Photographer	USGS/Woods Hole
Alan Gray	Airgun Engineer	IOS/U.K.
Gareth Knight	Navigation	RVS/U.K.

Purpose: The purpose of this cruise was to map the entire ocean floor of the EEZ of Puerto Rico and the U.S. Virgin Islands.

Scientific Equipment Employed and Data Collected:

- GLORIA II long-range sidescan-sonar system was used on its 30-second scan setting. The data were recorded digitally on magnetic tape and were also printed on photographic film.

- The single-channel seismic-reflection profiling system used an 80 cu. in. airgun. These analog data were recorded on magnetic tape and on 2 flat-bed recorders at 5- and 10-second sweeps.

- 10 kHz echo sounder data were recorded on a wet paper record.

- 3.5 kHz echo sounder data were recorded on a paper record.

- Magnetic data were recorded on both magnetic tape and paper.

- Navigation was provided mostly by transit satellites and dead reckoning. GPS was used during the few hours each day when it was available. Data were recorded on magnetic tape.

Tabulated Information:

- Days at sea: 30
- Line miles of data (each type listed above): 5150 n. miles (9538 km)

Comments:

The GLORIA side-scan sonar data are of excellent quality and complete coverage of the EEZ area was obtained. No down-time was experienced by GLORIA. The airgun, 10 kHz echo-sounder, and magnetic data are also of high quality with only a few hours of airgun data lost because of technical problems. The 3.5 kHz echo-sounder records vary in quality from good to very noisy.

This cruise was made scientifically successful and most enjoyable by the cooperation and competence of the ship's officers and crew and our multinational scientific staff.

